

Building the Peeragogy Accelerator

Joseph Corneli, Dorota Marciniak, Charles Jeffrey Danoff, Charlotte Pierce,
Paola Ricaurte, Jan Herder, Suz Burroughs, George Brett, John Graves

Abstract

The Peeragogy Project facilitates the reflective practice of peer learning and peer production. We are building living projects that continuously evolve, and we have come together with several of our own projects to build a space for mutual aid. In short, we are building a peer produced Peeragogy Accelerator. We present the background and operating principles of the Accelerator, and describe some of the Accelerated projects: SOLE out of the Box, which aims to build a self-sufficient distributed makerspace; PlanetMath.org, an online mathematics community that will soon run its first peeragogical Calculus course; and *Managing Innovation and Change*, a semester-long academic course on building startups that is using peeragogy concepts. The Peeragogy Accelerator works “transversally” across these and other projects, supporting both peer-to-peer and Project-to-Project collaboration. We are actively seeking to involve others from the OER world.

Keywords: peer learning, peer production, peeragogy

Introduction

The Peeragogy Project combines reflection and practice in support of peer learning and peer production. An emphasis on both *doing* and *understanding how* gives us a distinct perspective. The project synthesizes communication and contributions from globally distributed members. We are teachers, students, and researchers; editors, publishers, and writers; activists, makers, and (co)designers; but inside the project, there are no “teachers” or “students.” Each contributor brings their own vision and values, and we all learn. When we come temporally together, the “Aha!” moments come thick and fast. In the process, differing viewpoints emerge, but we find agreement to be less important than co-creation of a space for learning and productive work. We emphasize the central importance of an environment of mutual respect and enjoyment. This approach has profound implications for the way we do things, and what we choose to work on.

We have always preferred to *drink our own champagne* – but new wine needs new bottles. Having co-produced the *Peeragogy Handbook* (Rheingold *et al.*, 2014) and learned a lot in the process, we are now building a peer produced Peeragogy Accelerator – a living resource for those seeking assistance with applying the reflective practice of peer learning and peer production in their own projects. A brief “Who, What, When, Where, Why, and How” exercise from the *Peeragogy Handbook* plays the role of *S. cerevisiae* for our new brew.

1. **Who: Fluxuating roles.** Some of the people involved in the Accelerator were involved as co-authors of the *Handbook*. Others joined the Accelerator driven by interests in topics such as open source, open science, open education, and peer-to-peer, informal education. We have different visions: it's *not about consensus*.
2. **What: Nature of the project.** The Peeragogy Project has built peeragogy as "something for us" rather than "something for them." The Accelerator will help make the *Handbook* useful for new projects: we improve our methods as we go.
3. **When: Time management.** We hold regular weekly meetings on Mondays at 6PM UTC, with break-out meetings and asynchronous collaboration as needed. We publish the *Handbook* annually on January 1st (Public Domain Day). The Accelerator will formally induct the first "class" in June.
4. **Where: Journey vs destination.** We value the process more than the product. The Accelerator aims to be a meta project, a *place for people to bring their own projects* and receive support from each other.
5. **Why: Putting peeragogy into practice.** "Success" in our own projects will provide case study material to *improve* the Handbook.
6. **How: Linearity vs Messiness.** Our "How to Get Involved" page contains a list of tools and activities. Keeping in mind the importance of polycentric leadership in the Peeragogy Project, people should feel free to innovate. Our general operating principles are below.

We are different from other incubator and accelerator projects in that we are entirely peer produced. Instead of signing away a percentage of future profits or some of us paying tuition to others for mentoring services, contributors "p(l)ay" together, with volunteer effort in the present.

Operating principles for the Peeragogy Accelerator

A living project

1. We build *living projects* that can continuously evolve.
2. We measure our progress by things *actually done*, and the process by which they are done.
3. Although we can, and do, adopt concrete goals (for example, to write a book or collaborate on this paper), we do not expect our work to be *final*. Every contribution leads to improvement.
4. In the Accelerator, people can *branch, fork and merge* other projects, as they might with source code in a Git repository. Each version or thread has its own life.

Peeragogy Labs: try new things, and discover what works!

5. Everyone chooses their own meaningful contributions – and each may (optionally) have their own business models in mind.
6. We use non-restrictive licenses, and each member can re-package Peeragogy in their own way if they want to. For example, a fee-based peeragogy workshop and pay-to-download Peeragogy notebooks are entirely compatible with what we're doing with the all-volunteer Accelerator and the co-created CC-Zero *Peeragogy Handbook*.
7. Although we released our *Handbook* into the Public Domain, we do like to know who made things with it, how they made it, and why. We manage this information in an extra-legal way. Indeed, we cannot enforce informed re-use, since there is no uniform way to express this sort of information. We strive for good ways to express and implement sharing at this level, building towards a *creativity commons*, above and beyond the legal instruments of the Creative Commons.

Measure of success → values

8. Instead of measuring “success” via downloads or sales, we ask:

What have we actually done? How was it done? What values did we evolve in ourselves? What did we learn to support? What values did we share with the world? How did we experientially support something for someone? What did we change in the world in the process? How did we improve our own well-being? How did we evolve as a group?

9. Accordingly, in general we measure in a qualitative way, rather than a quantitative way. We can certainly do quantitative studies in order to help understand how things work, but this understanding does not come from measuring isolated and arbitrary scalar values like “participation”.

Creating contexts

10. Ask “What’s the next step?” rather than “What’s the ultimate goal?” If we are going in a given direction, it does not mean we need to go forever in that direction. An important part of peeragogy is making it clear how people can become meaningfully involved with what you are doing.
11. For example, when the Peeragogy Project was just about writing the *Handbook*, that was the one thing people could get involved with. In the Accelerator, you do not need to be a co-author to become involved – you need only share an idea for a peer learning or peer production project. And we can always strive to go further in this way.

Background

Peer production in education is not new. Booker T. Washington's students and faculty learned agriculture, architecture and construction as they built the Tuskegee Institute, producing an educational institution that thrives today, more than a century after Washington (1901) wrote these words:

I was determined to have the students do not only the agricultural and domestic work, but to have them erect their own buildings. [...] Not a few times, when a new student has been led into the temptation of marring the looks of some building by lead pencil marks or by the cuts of a jack-knife, I have heard an old student remind him: "Don't do that. That is our building. I helped put it up."

Information technology amplifies opportunities for peer-to-peer collaboration. Following Benkler's (2002) seminal work, Shaw & Hill (2014) describe an important new way of working that has developed considerably over the last decade:

Commons-based peer production – the distributed creation of freely accessible information resources through the mass aggregation of many small contributions – represents a model of collective action and public goods production that integrates the use of digital communication networks and information technologies.

These authors make it clear that peer production is not a panacea, but it is also not the only relevant recent innovation. Design patterns, invented by Christopher Alexander in the field of architecture in the 1970s (Alexander, Ishikawa, and Silverstein, 1977), and spreading from there to software (Gamma *et al.*, 1994; Gabriel, 1996), and later, to other fields, provide a way to communicate and share effective practice. "Pedagogical Patterns" is a network that came together to develop and provide easily transferable strategies showing how best to bestow knowledge. The *Peeragogy Handbook* includes our own catalog of design patterns that explore how peers can produce knowledge together, while building a shared "how-to".

When we think of *open practice*, following Asger Jorn (1994 [1960]), we think of an exploration of the "polyvalence of the unique". Some of the groundwork for peeragogy was developed when two of us did this at P2PU, signing up for each other's courses and critically examining the institution as a whole as the term progressed (Corneli & Danoff, 2011).

Peer learning is not something to "provide" (Boud & Lee, 2005), but something to do – and, of course, something to study – but we strongly prefer to do this in the mode of studying *with*. As with the Las Endredadas network of Latin American activists, the Infusion Project built by creative professionals, and the *Open Advice* book created by some of the leading figures in open source software, we are building our own meta-project to pursue this goal.

Works in Progress in the Accelerator

The current list of Accelerated projects is as follows:

- SOLE Out of the Box,
- PlanetMath.org,
- Mr. Danoff's Teaching Laboratory,
- "PeerPubU", a project by the Independent Publishers of New England (IPNE),
- Managing Innovation and Change, a course at the Bill Greehey School of Business, St Mary's University in San Antonio,
- The Peeragogy Accelerator itself
- ... and enrollment for this round is open until June 1st, 2014.

In the limited space, we will not be able to describe all of these projects in depth, so we focus on a few examples. More information can be found on the landing page for the Peeragogy Accelerator group on the Commons Abundance Network.

SOLE out of the Box

This project is building a strategy to create a self-sufficient, Self Organizing Learning Environment (SOLE) (Mitra & Dangwal, 2010), in the form of a distributed 'makerspace.' We want to tackle two interrelated global problems: access to education and access to meaningful employment. The innovation would be to build a system that sustains the development of self-directed learners, through a network of living centers, which have correct complexity to evolve sustainably and abundantly. These "Learner Makerspaces" are a distributed network of micro universities. They are considered social businesses, because their purpose is to provide employment while each participant learns. A core group of organizers initiate the makerspace, building initial working models and an "Owners Manual". Investors contribute to capital and infrastructure. Wages and operating expenses are generated from the activity of the makerspace. The project's initial income plan is to abundantly produce food through the science of aquaponics, using Arduino monitors. This leads to a STEAM-focused project-based makerspace and will provide the foundation for a 'Cyber Cafe' to initiate the SOLE.

PlanetMath.org

Following on Joseph Corneli's (2014) thesis work, in which PlanetMath users helped develop new design patterns that could be used to improve PlanetMath as a learning platform, there were many high-level and low-level programming changes to make, including development work to improve PlanetMath's presentation of books. We plan to import mathematics books from Project Gutenberg and other sources, and apply optical character recognition (OCR) techniques to retrodigitize more math books ourselves. One of the books we have already imported is an early 20th Century Calculus textbook (Davis & Brenke, 1912), which includes some rather quaint examples, but which otherwise looks quite contemporary when rendered in MathML. We are planning an online peeragogical Calculus course, whose syllabus will feature this text and other resources from around the 'net. This course is built around design patterns – including patterns to deal with the common points of confusion associated with Calculus.

Managing Innovation and Change

This course on *Managing Innovation and Change* is targeted for Junior and Senior high performing undergraduates at the Bill Greehey School of Business at St. Mary's University in San Antonio. The course integrates peeragogical concepts in an "amortized" manner. Students have increasing autonomy as the course progresses.

The course is structured with a flipped classroom format and labs or workshops in the first half of the semester and a real world practicum project graded on execution and impact in the second half. Assessment is based on a student-generated peer assessment rubric. Accelerator members have offered peeragogical support, discussing the course concepts and design in a weekly online PreK-16 practitioners forum.

Our objective in this course is to fill the current educational model gaps, by teaching collaboration skills and integrated systems thinking. We are frequently reminded by students that we address skills and concepts not covered by any other courses in the school such as teaming, social media marketing, cloud collaboration, web site editing, and strategies for coping with high performance contexts.

The change in expectations and context has been disorienting for students, as is the online learning portion for the course. The technology presents one learning curve, and the human aspects of the digital context are another. We opted to strictly require online participation. We frequently read in weekly journals that we are opening up experiences of things that students feel they should be getting throughout their degree program.

Auto-Acceleration of the Peeragogy Accelerator

Peeragogy is large and diffuse, but in order to facilitate progress at a rapid pace, we have convened a small working group of persons with relatively concrete goals. The Accelerator is supported by peeragogy mavens, but, critically, it is also open to newcomers who are trying to understand and integrate peeragogy processes and metaphors into their context. Working together, we all learn.

Discussion

Building on our peer-to-peer experiences working together on the *Peeragogy Handbook* we have re-organized ourselves for Project-to-Project collaboration. Our methods include "Hive editing" document meetings (working as a group using recorded Hangouts on Air together with Google Docs or Etherpads), and "Wrapping" our works-in-progress with summaries for a wider contributing public. It is worth emphasizing, again, that we all have our own working methods and preferences, and that we do not require everyone to do things the same way. Our attention options for our meetings include: participating in the live hangout, watching the video stream and joining asynchronously later via the Peeragogy in Action Google+ community. When writing collaboratively, some like to edit, others to comment. We learn from each other's approaches and values, and create new values together, e.g., observing that it is very useful, when one person is talking during a meeting, for another to type a transcript of what that person is saying. We encourage contributing projects to carefully specify their own operations and the qualitative outcomes that they are seeking through Acceleration.

Limitations and Future Work

We cannot currently point to a case study that demonstrates “X% passing without peeragogy, and Y% passing with peeragogy,” or anything of this sort. We may be experiencing a “Peeragogy Island” effect: we are quite happy with what we are doing, but it does not always resonate with outsiders. Even so, examples like *Managing Innovation and Change* show that peeragogy can be not only compatible, but helpful at numerous points within a (relatively) mainstream course.

How can we escape from Peeragogy Island? Involving others from the OER world, as we are doing in our workshop for OER14, may be very helpful for this. We have improved on our previous outreach activities by providing more concrete ways for people to get involved. Many Future Work ideas are recorded as “What’s Next” sections in the patterns in our pattern catalog – a “living” design for a living project.

Summary of our contributions

Peer learning and peer production benefit from participatory engagement at every level. Building novel systems for collaboration that are themselves peer produced offers users rich opportunities for meaningful engagement. The *Peeragogy Handbook*, including the latest version of our design pattern catalog, is a peer produced Open Educational Resource, available under the terms of the Creative Commons Zero license: it can be freely adapted. We continue to improve and refine the *Handbook* through our work in the Peeragogy Accelerator.

References

- Alexander, C., S. Ishikawa, and M. Silverstein (1977). *A Pattern Language: Towns, Buildings, Construction*. New York: Oxford University Press.
- Benkler, Y. (2002). Coase’s Penguin, or, Linux and the Nature of the Firm. *Yale Law Journal*, 112(3):369.
- Boud, D., & Lee, A. (2005). ‘Peer learning’ as pedagogic discourse for research education. *Studies in Higher Education*, 30(5):501–516.
- Corneli, J. (2014). “Peer Produced Peer Learning: A Mathematics Case Study” PhD Thesis, The Open University.
- Corneli, J., and C. J. Danoff (2011). "Paragogy." *OKCon 2011*.
- Davis, E. W., and W. C. Brenke (1912). *The Calculus*. New York: Macmillan Company.
- Gabriel, R. P. (1996). *Patterns of software*. New York: Oxford University Press.
- Gamma, E., R. Helm, R. Johnson, and J. Vlissides (1994). *Design patterns: elements of reusable object-oriented software*. Upper Saddle River: Pearson Education.

Jorn, A. (1994). *Open Creation and Its Enemies: With Originality and Magnitude (on the System of Isou)*. London: Unpopular Books.

Mitra, S., & Dangwal, R. (2010). Limits to self-organising systems of learning—the Kalikuppam experiment. *British Journal of Educational Technology*, 41(5), 672-688.

Shaw, A., & B. M. Hill. (Accepted/Forthcoming) "Laboratories of oligarchy? How the iron law extends to peer production." *Journal of Communication*. Preprint available at http://mako.cc/academic/shaw_hill-laboratories_of_oligarchy-DRAFT.pdf.

Rheingold, H. *et al.* (2014) "The Peeragogy Handbook." (2nd ed.) Chicago: PubDomEd and Boston: Pierce Press. <http://peeragogy.org/>

Washington, B. T. (1901), *Up from Slavery: An Autobiography*. New York: Doubleday.